REMARKS / ARGUMENTS

The present application includes pending claims 1-17, all of which have been rejected. Claims 1, 6 and 11 have been amended to clarify the claim language. The Applicant points out that the amendments to the claims find support at least in the summary of invention and Fig. 1 with its related detailed description. The Applicant respectfully submits that the claims define patentable subject matter.

Claims 1-3, 5-8, 10-13 and 15-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over USPP 2004/0131109 ("Kim") in view of USP 6,088,390 ("Russell"). Claims 4, 9 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim and Russell in view of USPP 2003/0123586 ("Yen"). Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim and Russell in view of USPP 2004/0125884 ("Wei"). The Applicant respectfully traverses these rejections at least based on the following remarks.

REJECTION UNDER 35 U.S.C. § 103

In order for a *prima facie* case of obviousness to be established, the Manual of Patent Examining Procedure, Rev. 6, Sep. 2007 ("MPEP") states the following:

> The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere

conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."

See the MPEP at § 2142, citing In re Kahn, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), and KSR International Co. v. Teleflex Inc., 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval). Further, MPEP § 2143.01 states that "the mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" (citing KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385, 1396 (2007)). Additionally, if a prima facie case of obviousness is not established, the Applicant is under no obligation to submit evidence of nonobviousness:

> The examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness.

See MPEP at § 2142.

I. The Proposed Combination of Kim and Russell Does Not Render Claims 1-3, 5-8, 10-13 and 15-16 Unpatentable

The Applicant now turns to the rejection of claims 1-3, 5-8, 10-13 and 15-16 as being unpatentable over Kim in view of Russell. The Applicant notes that the proposed combination of Kim and Russell forms the basis for all of the pending rejections.

A.   Independent Claims 1, 6 and 11

With regard to the rejection of independent claim 1 under 35 U.S.C. § 103(a), the Applicant submits that the combination of Kim and Russell does not disclose or suggest at least the limitation of "said block code based error correction scheme **utilizes a feed forward equalizer filter for filtering at least a feedback signal comprising information from said at least one error correction code word**," as recited by the Applicant in independent claim 1.

The Final Office Action states the following:

> 1. As per claim 1, Kim.et al teaches a method for equalization in a communications system, the method comprising: Decision feedback equalizer that is used for removing post cursor inter-symbol interference (See fig.1 b element 16 and abstract and paragraph [0016-0017]) in a block code based error correction scheme (see fig.1.b element 92 and paragraphs [0024] and [0046-53] and page 7, lines 27-30); *wherein said block code based error correction scheme is utilized in the communication system* (see paragraph [0010-0013]).
>
> 2. However Kim does not teach removing post cursor inter-symbol interference within at least one error correction code word in a block code.
>
> 3. Russel et al teaches a DFE for removing post cursor inter-symbol interference within at least 'one error correction code word in a block code (see fig.5 element 504 and 506 and abstract and col.1, lines 45-67 and col. 2, lines 18-40 and col. 5, lines 1-35).

See the Final Office Action at pages 2-3. The Examiner relies for support on Kim's Fig. 1b, and equates Kim's disclosure of using a decision feedback equalizer 16 for post cursor ISI cancellation, to "removing post cursor inter-symbol interference (ISI) within at least one error correction code word," as recited in Applicant's claim 1. The

Examiner also relies on Russell to disclose the alleged "block code based error correction scheme".

Nevertheless, the Applicant points out that Kim does not disclose using a feed forward equalizer filter in the communication system. In fact, Kim's abstract teaches a communication system without specifically incorporating a feed forward equalizer filter. For example, the Kim's abstract states the following:

> "A bidirectional turbo ISI canceller **cancels precursor-ISI as well as postcursor-ISI** in a received signal **without incorporating a multiplicative feedforward equalization filter**. This is accomplished by taking a three-step receiver design approach. In the first step, an optimal single-symbol RAKE receiver is designed to comprise a CMF, a codeword correlator bank, and an energy bias (EB) canceller under the assumption that no ISI is generated by preceding or trailing symbols. In a second step, a DFE is included for suppressing postcursor-ISI caused by a preceding symbol. Finally, a precursor ISI canceler is used to remove the remaining ISI caused by a trailing symbol. All three components may be integrated into a BTIC-based receiver applying turbo-iteration processing."

See Kim's Abstract (emphasis added). Kim's abstract, in fact, teaches away from using a multiplicative feedforward equalization filter. Even though Russell and Yen (a reference used to reject dependent claim 4) discloses using a feedforwrad filter 12, Russell and Yen, however, do not disclose "**filtering** at least a portion of **feedback signal** comprising information **from said at least one error correction code word**," as recited in Applicant's claim 1. In this regard, Applicant's claim 1 further distinguishes from Kim, Russell and Yen.

Accordingly, the proposed combination of Kim and Russell does not render independent claim 1 unpatentable, and a *prima facie* case of obviousness has not been established. The Applicant submits that claim 1 is allowable. Independent claims 6 and 11 are similar in many respects to the method disclosed in independent claim 1, and are also submitted to be allowable for the reasons stated above with regard to claim 1.

B.   Rejection of Dependent Claims 2-3, 5, 7-8, 10, 12-13 and 15-16

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 6 and 11 under 35 U.S.C. § 103(a) has been overcome and requests that the rejection be withdrawn. Additionally, claims 2-3, 5, 7-8, 10, 12-13, and 15-16 depend from independent claims 1, 6 and 11, and are, consequently, also respectfully submitted to be allowable.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 2-3, 5, 7-8, 10, 12-13, and 15-16.

II.   The Proposed Combination of Kim, Russell and Yen Does Not Render Claims 4, 9 and 14 Unpatentable

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 6 and 11 under 35 U.S.C. § 103(a) has been overcome and requests that the rejection be withdrawn. Yen does not overcome the deficiencies of

Kim and Russell. Claims 4, 9 and 14 depend from independent claims 1, 6 and 11, respectively, and are, submitted to be allowable.

III. The Proposed Combination of Kim, Russell and Yen Does Not Render Claim 17 Unpatentable

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 6 and 11 under 35 U.S.C. § 103(a) has been overcome and requests that the rejection be withdrawn. Wei does not overcome the deficiencies of Kim and Russell. Claim 17 depend from independent claim 11, and is, submitted to be allowable.

CONCLUSION

Based on at least the foregoing, the Applicant believes that all claims 1-17 are in condition for allowance. If the Examiner disagrees, the Applicant respectfully requests a telephone interview, and requests that the Examiner telephone the undersigned Patent Agent at (312) 775-8093.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

Date: January 4, 2010

    / Frankie W. Wong /
     Frankie W. Wong
     Registration No. 61,832
     Patent Agent for Applicant

MCANDREWS, HELD & MALLOY, LTD.
500 WEST MADISON STREET, 34TH FLOOR
CHICAGO, ILLINOIS 60661
(312) 775-8093 (FWW)